

Prototype for Medical Facility Orders During a Radiation Event

September 14, 2007

- Orders must be customized for each event and patient!
- Consider early consultation with
 - Oncology services: medical, radiation, pediatric, transplant
 - Transfusion medicine
 - Radiation Safety
 - Nuclear medicine
 - Mental health

Patient Name: _____

Patient ID Number: _____

Family Contact Information: _____

1. Admit to:

___ Hospital ward _____
___ Team: _____
___ Physician: _____
___ Area: _____
___ ICU: _____
___ Other: _____

2. Diagnoses: event specific and prior

Radiation contamination

see [Body Chart](#) on last page of this document to record results of whole body radiation survey.

___ External with Isotope: _____

___ Internal with isotope: _____

___ Unknown isotope:

Radiation Exposure / Acute Radiation Syndrome (ARS)

___ Estimated dose to whole/partial body (dose in cGy) _____

___ Dose unknown

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Other complicating factors

___ Injuries (specify): _____

___ Burns (specify): _____

___ Specific population: (potentially requiring more customized management)
See REMM Specific Populations page: <http://remm.nlm.gov/specialpops.htm>

___ Young age

___ Old age

___ Pregnant

___ Immunosuppressed

___ Physical accommodation required

___ Psychiatric issues

___ Language or cultural accommodation required

Significant pre-existing medical conditions:

Medications used prior to this event that will be continued:

3. Condition:

___ Fair ___ Stable ___ Guarded ___ Critical

4. Vital Signs:

___ Every ___ hours X ___ times, then every ___ hours x ___ times

___ Ward routine

___ Other _____

Notify physician for: Adults

Temperature > 38.5 °C
Systolic BP > 180, <100
Diastolic BP > 100 < 50
HR >100 <50
RR >30 <8
O2 sats < 92%

Peds

Temperature > 38.5 °C
Systolic BP > ___ <___
Diastolic BP > ___ < ___
HR >___ <___
RR >___ <___
O2 sats < 92%

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5. Special orders for radiation contamination:

___ Radiation precautions

- Universal Precautions: gowns, mask, cap, boots, and gloves
- Use hospital procedure for discarding biological waste (all body fluids) and physical waste (linens/towels/trash/disposable equipment), which may also be radioactive
- Page Radiation Safety Officer at (XXX) XXX-XXXX for additional instructions
- Place Radiation Safety sign on door (if patient has internal or external radioactive contamination)
- Place sign indicating pregnant staff may not enter the room/area
- Everyone entering room/area must wear personal radiation dosimeter

6. Allergies:

___ No known drug allergies

___ Yes, allergies. Specify: _____

7. Activity:

___ Bedrest

___ BRP (bathroom)

___ Out of bed every ___ hrs.

___ Ambulate as tolerated

8. Diet:

___ NPO

___ Advanced as tolerated

___ Regular for age

___ Other Specify: _____

9. Height and weight:

Height ___ feet ___ inches
___ cm

Weight ___ lbs ___ oz
___ kg

Measure body weight every ___ hours

every ___ days

10. Peripheral IV management:

___ IV Fluids: _____ @ _____ cc/hr, with additive _____

___ IV Fluids: _____ @ _____ cc/hr, with additive _____

11. ___ Foley catheter management:

Use radiation precautions for all body fluids in patients who may have radiation contamination.

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12. **Monitor Input / Output** every _____

Use radiation precautions for all body fluids in patients who may have radiation contamination.

13. **Deep Venous Thrombosis (DVT) prophylaxis:**

___ Compression garment to Bilateral Lower-Extremities (BLEs)

___ Sequential Compression Devices (SCD) to BLEs

___ Anticoagulation regimen: specify drug/dose/frequency/delivery route:

14. **Respiratory Care:**

___ Room air

___ Oxygen via
Nasal cannula
Other oxygen delivery method. Specify: _____
Titrate for saturation \geq _____%

___ Chest tube care Specify: _____
Use radiation precautions for all body fluids in patients who may have radiation contamination.

___ Respirator instructions and settings: _____

___ Medications for wheezing Specify: _____

15. **Wound care:**

___ Apply sterile dressing to wounds daily.

___ Monitor waste:
Use radiation precautions for all body fluids in patients who may have radiation contamination.

___ Apply topical medication (specify): _____

___ Other management: (pager skin care team XXX-XXXX) _____

For skin burns:

See REMM burn therapy recommendations: <http://remm.nlm.gov/burns.htm>

Burn topical regimen _____

Replace body fluids _____

Other burn therapy _____

Consult burn team: (pager XXX-XXXX) _____

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16. Orthopedic care:

- ☐ Splint/brace/cast Specify: _____
- ☐ Other ortho management procedure per orthopedics: (Ortho pager XXX-XXXX)
Specify: _____

17. Admission studies:

- ☐ CBC w/differential
- ☐ Metabolic panel or equivalent Specify _____
- ☐ Cardiac enzymes
- ☐ PT / PTT
- ☐ Urinalysis / Urine culture and sensitivity
- ☐ Thyroid Function Tests: specify as appropriate
- ☐ Serologies
 - ☐ Herpes Simplex Virus type 1 (HSV-1)
 - ☐ Herpes Simplex Virus type 2 (HSV-2)
 - ☐ Cytomegalovirus (CMV)
 - ☐ Varicella-zoster virus (VZV)
- ☐ EKG (baseline study, specify any additional details _____)
- ☐ CXR (specify where, when, request details) _____
- ☐ Other imaging studies Specify: _____

18. Standing laboratory studies

- ☐ CBC w/diff:
 - Every _____ hours, x _____ days, then
 - Every _____ hours until further orders
- ☐ Metabolic panel or equivalent Specify: _____
 - Every _____ hours, x _____ days
 - Every _____ days
- ☐ Other Specify: _____

19. EKG (subsequent)

- ☐ STAT EKG for chest pain, notify physician

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20. Biodosimetry tests:

Dicentric chromosome count: to evaluate radiation exposure dose

___ Draw extra green top tube on (specify when) and send to lab on ice

Where to send dicentric chromosome specimen assays?

Armed Forces Radiobiology Research Institute

<http://www.afrrri.usuhs.mil/>

8901 Wisconsin Avenue

Bethesda, MD 20889-5603

Contact Security in Emergencies: 1-301-295-0530

Medical Radiology Advisory Team: 1-301-295-0316

or

Oak Ridge Institute for Science and Education, Radiation Emergency

Assistance Center/Training Site (REAC/TS)

Cytogenetic Biodosimetry Laboratory

<http://orise.orau.gov/reacts/cytogenetics-lab.htm>

Attn: Dr. Doran Christensen

P.O. Box 117, MS 39

Oak Ridge, TN 37831-0117

Emergency: DOE/ORO: 1-865-576-1005 (ask for REAC/TS), this is also the
after hours number

At other times: 1-865-576-3131 (between 8:30-4:30 CST)

Evaluate for internal contamination:

___ Whole body nuclear medicine scan (Consult with nuclear medicine)

___ Whole body radiation survey (Consult with radiation safety officer)

Use radiation precautions for all body fluids in patients who may have radiation contamination.

___ Spot urine for _____ radioactive isotope

___ 24-hour urine for _____ radioactive isotope

___ Spot fecal specimen for _____ radioactive isotope

___ 24-hour fecal specimen for _____ radioactive isotope

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Send specimens for evaluation of radioactive isotope to outside lab:

Name of Lab: _____
Address of Lab: _____
To the Attention of: _____

21. For isotope decorporation: Caution

See details on REMM Countermeasures Table:

http://remm.nlm.gov/int_contamination.htm#blockingagents

- Many of the listed countermeasures have an unfavorable risk-to-benefit ratio when used to treat persons having low levels of internal contamination
- Most authorities do not recommend treatment of internal contamination when the body burden is less than one annual limit of intake (ALI)
- Treatment is strongly recommended when the body burden exceeds 10 ALI. For internal contamination levels greater than 1 ALI and less than 10 ALI, clinical judgment dictates treatment of internal contamination
- **Special caution should be used when these countermeasures are used in children**

22. ___ Type and screen

Use leukoreduced AND irradiated products only for patients with significant radiation exposure.

See REMM blood recommendations: <http://remm.nlm.gov/bloodtransfusion.htm>

For ___ units ___ packed red blood cells

For ___ units ___ platelets

23. General Medications: **Use as appropriate for each patient.**

For stomach (ulcer) prophylaxis:

___ Specify medication of choice _____

For nausea & vomiting:

___ Specify medication of choice _____

For anxiety/insomnia/breakthrough nausea:

___ Specify medication of choice _____

For Fever:

___ Specify medication of choice _____

For diarrhea:

___ Specify medication of choice _____

For constipation:

___ Specify medication of choice _____

For rash/itching:

___ Specify medication of choice _____

For pain:

___ Specify medication of choice _____

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24. Neutropenia therapy, if indicated.

Consider whether treatment is *prophylactic* or *therapeutic*, i.e. after organism is identified.

Evaluate febrile neutropenia:

___ Blood cultures x 2 sets

___ UA w/culture

___ Sputum culture + sensitivity

___ CXR

___ Other culture + sensitivity (specify): _____

Antimicrobial therapy: if indicated

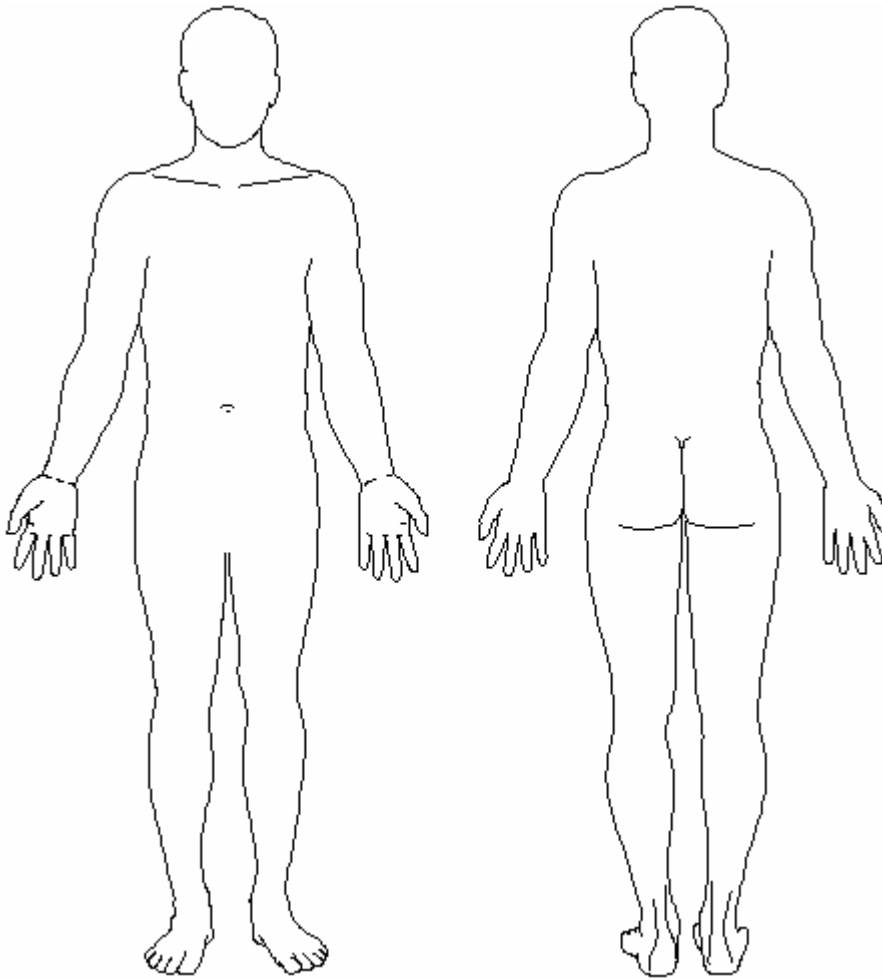
Anti-bacterial _____

Anti-viral _____

Anti-fungal _____

Other supportive care: _____

Body Chart for Recording Results of Radiation Survey



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